

REMARKS

This patent application presently includes claims 1-7, all of which stand rejected. Claim 6 is amended to define the applicants' invention more clearly and all rejections are respectfully traversed.

Claim 6 was rejected as anticipated by Hanoka, U.S. Patent No. 5,733,382. This rejection is respectfully traversed. Hanoka does not teach or suggest the present invention.

In rejecting the claim, the Examiner has adopted the artificial interpretation that each set of serially connected solar cells 46 constitutes a sub-module. However, in the present invention, the sub-modules are actually separate, not a section of a full module. To emphasize this point, claim 6 has been amended to define that each sub-module includes a glass substrate and the plurality of solar cells arranged on the substrate. This structure is not taught or suggested by Hanoka. First of all, the cells 46 in Hanoka are all mounted on a common sheet 44, and the sheet is ionomer, so the present claim distinguishes over Hanoka in two respects. This rejection should now be withdrawn.

Claims 1-5 were rejected as obvious over Younan et al. in view of Tennant and further in view of JP 11-195803. This rejection is respectfully traversed. None of these references, nor any combination thereof, teaches or even suggests the present invention.

In the paragraph bridging pages 5 and 6 of the Office Action, the Examiner admits three respects (indicated as sub-paragraphs a, b, and c) in which Younan does not disclose the subject matter of claim 1. He then cites JP '803 for feature a and Tennant for feature b. Initially, it is noted that the Examiner's entire approach to making the obviousness rejections in the present instance is flawed. In making the present obviousness rejections, the Examiner has improperly, selectively combined disclosures from three references. Basically, the examiner has looked at the disclosure of the present application

and has used it to arbitrarily select features from the cited references to make the rejection. Apparently, the examiner has overlooked the requirement that for references to be combined, "there must be some reason, suggestion or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge cannot come from the applicants= invention itself." *In Re Oetiker*, 24 U.S.P.Q. 2d 1443 (Fed. Cir. 1992). "The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 23 U.S.P.Q. 2nd 1780, 1783 (Fed Cir. 1992).

It is error to reconstruct the patentee's claimed invention from prior art by using the patentee's claim as a "blueprint" when prior art references require selective combination to render obvious a subsequent invention. There must be some reason for the combination other than the hindsight obtained from the invention itself. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132 (Fed. Cir. 1985).

Indeed, the only disclosure for the combination made by the examiner (which, nevertheless, does not lead to the present invention, as is shown below) is the present patent application itself. As stated by the CAFC in *In Re Fritch*, 23 USPQ 2d. 1780 (Fed. Cir. 1992):

[I]t is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious... This court has previously stated that "one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

The CAFC has also stated that:

As in all determination under 35 U.S.C. '103, the decision maker must bring judgment to bear. It is impermissible, however, simply to

engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps.

In Re Gorman, 18 USPQ 2d. 1885 (Fed. Cir. 1991).

It might very well be asked how the present invention could be considered obvious, since there are substantial benefits derived from the invention and none of the references even suggests it.

We do not pick or choose among the individual elements of assorted prior art references to recreate the claimed invention, but rather, we look for some teaching or suggestion in the references to support their use in the particular claimed combination.

Symbol Technologies, Inc. v. Opticon, Inc., 19 USPQ 2d. 1241 (Fed. Cir. 1991).

It is by now well settled that obviousness cannot be established by combining the teachings of prior art references to produce a claimed invention, absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montifore Hospital*, 221 USPQ 929 (Fed. Cir. 1984).

In summary, the examiner has no basis for making the combination he suggests, and even if that combination were made, it would not lead to the present invention.

Furthermore, the Examiner's reliance in JP '803 is misplaced. He asserts that it would have been obvious to modify the outputs of the modules of Younan to have equal voltage because JP '803 discloses that mismatches in voltage in connected units results in a loss of power. However, the paragraph [0045] of Younan states that "although lost by the mismatch of string voltage occurs, since sufficiently larger gain than the output loss of the mismatch of an in-

series number can be acquired from two modules, it turns out that many solar cell modules can be installed by using a different-species serial, and the output increases from the conventional array.” This means that the gain caused by connecting different types of modules is larger than the loss caused by the mismatch in voltage. Thus, it would not be obvious to adopt a disadvantageous connection method that is disclosed as providing a smaller gain.

Hence, JP ‘803 would discourage one from making the combination suggested by the Examiner, and it would not be made by those skilled in the art. That is JP ‘803 teaches away from the present invention. Claims 1-5 are therefore believed to be unobvious and patentable over the cited references.

Claims 1-5 were also rejected as obvious over Dillard in view of Tennant. This rejection is respectfully traversed. Neither reference, nor the combination thereof renders the present claims obvious.

The Examiner asserts that, in one embodiment, Dillard discloses that one module comprises 72 solar cells having dimensions of 2 cm x 2 cm, that a second module comprises 72 solar cells having dimensions of .25 cm x .25 cm, and that both modules have an output of 36 volts (citing col. 1, line 52, to col. 2, line 57). However, the pertinent part of Dillard merely states that “if a 2 cm x 2 cm silicone solar cell were partitioned into 72 active areas connected in series, the 2 cm x 2 cm area would produce 36 volts. In this case, the .25 cm x .25 cm reference indicates only the area of each active area (i.e., $2 \times 2 \div 72$). Thus, Dillard describes nothing about connecting in parallel modules which have different areas.


Accordingly, the combination suggested by the Examiner does not even remotely approach the subject matter of claims 1-5. These claims are therefore believed to be allowable over the cited references or their combination. Claims 1-5 should be allowed.

Claim 7 was rejected as obvious over the admissions of prior art (APA) in view of JP 10-082152. This rejection is respectfully traversed. Neither reference nor the combination renders claim 7 obvious.

JP '152 merely describes the wiring in a terminal box but does not teach or suggest anything about sealing wiring members which electrically connect to adjacent solar cell sub-modules within a module. Accordingly, this rejection must fail and claim 7 is believed to be allowable over the references or their combination.

Applicants' attorney has made every effort to demonstrate that this patent application is now in condition for allowance. It is therefore earnestly requested that this patent application, as a whole, receive favorable reconsideration and that all of the claims be allowed as presently constituted. Should there remain any unanswered questions, the Examiner is requested to call the applicants' undersigned attorney at the telephone number indicated below.

Respectfully submitted,


Joseph B. Lerch
Reg. No. 26,936
Attorney for Applicants

DARBY & DARBY, P.C.
Post Office Box 5257
New York, NY 10150-5257
Phone (212) 527-7700